

**DEPARTMENT OF TRANSPORTATION**

DES-OE MS #43  
1727 30TH Street, 2ND Floor  
Sacramento, CA 95816



**\*\* WARNING \*\* WARNING \*\* WARNING \*\* WARNING \*\***

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February 1, 2002

04-CC-680-39.4/40.1  
04-006044  
ACIM-680-1(054)56

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for building construction on State highway in CONTRA COSTA COUNTY IN MARTINEZ FROM MOCOCO OVERHEAD TO BENICIA-MARTINEZ BRIDGE AND OVERHEAD.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on February 13, 2002.

This addendum is being issued to revise the Project Plans, the Notice to Contractors and Special Provisions, the Proposal and Contract, and the Federal Minimum Wages with Modification Number 19 dated 12-28-02. A copy of the modified wage rates are available for the contractor's use on the Internet Site:

**[http://www.dot.ca.gov/hq/esc/oe/weekly\\_ads/addendum\\_page.html](http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html)**

Project Plan Sheets 68, 70, 214, 215, 248, and 250 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheet 55A is added. Half-sized copies of the added sheet is attached for addition to the project plans.

Project Plan Sheets 186, 187, 188, and 190 are revised as follows:

All call-outs for "152 mm DIA DOWNSPOUT" are revised to "152 mm DIA RAINWATER LEADER."

Project Plan Sheet 196 is revised as follows:

In Section A, the call-out for "DOWNSPOUT" is revised to "RAINWATER LEADER."

Project Plan Sheet 201 is revised as follows:

In Detail 10, the call-out "152 mm DIA DOWNSPOUT RUNS DOWN ALONG CONC COLUMN, SEE SECTION SHEETS A2-4 THRU A2-6" is revised to "RAINWATER LEADER RUNS DOWN ALONG CONC COLUMN, SEE SECTION SHEETS A2-4 THRU A2-6."

In Detail 10, the call-out "76 mm DIA OVERFLOW DRAIN" is revised to "102 mm DIA OVERFLOW DRAIN."

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Project Plan Sheets 216 and 236 are revised as follows:

All call-outs for "RAINWATER DOWNSPOUT" are revised to "RAINWATER LEADER."

Project Plan Sheet 253 is revised as follows:

In detail A, "ALL GLAZING SHALL BE LAMINATED GLASS, BRONZE TINT" is revised to "ALL GLAZING SHALL BE LAMINATED GLASS, EVERGREEN TINT."

Project Plan Sheet 259 is revised as follows:

At column 4, the call-out "RAINWATER DOWNSPOUT" is revised to "RAINWATER LEADER."

At column 5, the call-out "RAINWATER DOWNSPOUT TYPICAL CONNECT TO STORM-WATER DRAIN" is revised to "RAINWATER LEADER TYPICAL CONNECT TO STORM-WATER DRAIN."

Project Plan Sheet 260 is revised as follows:

In Section A, the call-out "102 mm DIA ROOF DRAIN (FROM COURTYARD CANOPY)" is revised to "102 mm DIA RAINWATER LEADER (FROM COURTYARD CANOPY)."

Project Plan Sheet 264 is revised as follows:

At Columns 4 and 5, call-outs "102 mm STL RAINWATER DOWNSPOUT" are revised to "102 mm STL RAINWATER LEADER."

Project Plan Sheet 296 is revised as follows:

In Detail 3, note 2, "For Gutter detail, see Architectural Sheets.," is revised to "For Gutter detail, see Architectural Sheet, A1-79.3, Detail 1."

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the following paragraph is added after the last paragraph.

"The Contractor shall complete the Electrical Substation in the Operations Building prior to **November 1, 2003**. The minimum work necessary for the construction of the Electric Substation shall include the installation of HVAC, suspended fluorescent fixtures, doors, finish keys as well as grounding for the entire Operations Building, and all other works necessary such that the Electrical Substation shall be ready and available for the 04-006064 contractor to install the conductors and high voltage equipment, and test the system for safe operation."

In the Special Provisions, Section 10-1.02, "WATER POLLUTION CONTROL," is replaced with Section 10-1.02, "WATER POLLUTION CONTROL (STORM WATER POLLUTION PREVENTION PLAN)," as attached.

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In the Special Provisions, Section 10-1.05, "COOPERATION," the third paragraph is revised as follows:

"The Contractor shall permit the 04-006054 contractor, unimpeded access to north abutment of the new Mococo Overhead and the temporary ramp via Toll Plaza Access Road (PK-Line) and the Southern Parking lot."

In the Special Provisions, Section 10-1.05, "COOPERATION," the following paragraph is added after the last paragraph:

"The Contractor shall permit the 04-006034 contractor, unimpeded access to south abutment of the new Benicia/Martinez bridge via Toll Plaza Access Road (PK-Line) and the Northern Parking lot."

In the Special Provisions, Section 10-1.28, "WEATHER STATION," the following paragraphs are added after the eleventh paragraph:

"After the weather station system installation work has been completed, the system shall be tested in the presence of the Engineer to demonstrate that the system functions properly. Two weeks prior to field testing, the contractor shall submit to the Engineer for review, and approval an in-depth detailed testing procedure that includes the following:

- A. The manufacturers recommended testing procedures.
- B. Field calibration verification of all field installed equipment/devices (gauges, valves and instruments) shall be included in the field testing procedures to verify their accuracy.
- C. The testing format will be in a manner of a sign off sheet for the witnessing Engineer to sign.

The Contractor shall also submit to the Engineer prior to testing, all instrument and testing calibration certifications to be used. Calibration certifications have to be completed within 6 months of the required field tests.

No testing will be accepted without the test equipment calibration certifications or acceptable testing procedures.

The Contractor shall make necessary repairs, replacements, adjustments and re-tests at his expense."

In the Special Provisions, Section 12-1.15, "PROJECT RECORD DRAWINGS," is added as attached.

In the Special Provisions, Section 12-8.07, "GLAZING," in the subsection "PART2.-PRODUCTS," the following is added before the first paragraph:

"Laminated glass.—

Laminated glass shall be safety glass, 6 mm minimum thickness, fabricated from 2 pieces of Type I, Class 1, tint, Quality q4 or better glass fused to plastic interlayers. Glass shall be evergreen."

In the Special Provisions, Section 12-16.01, "ELECTRICAL WORK," under "PART 1.-GENERAL," the subsection "TESTING," is revised as attached.

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In the Special Provisions, Section 12-16.02, "BASIC MATERIALS AND METHODS," under "PART 2.-PRODUCTS," under "MISCELLANEOUS MATERIALS," in the subsection "Ground rod(s).—," the paragraph is revised as follows:

"Ground rod(s) shall be a 19 mm (minimum) copper clad steel rod, 3 meters long."

In the Special Provisions, Section 12-16.02, "BASIC MATERIALS AND METHODS," under "PART 3.—EXECUTION," under "INSTALLATION," the subsection "Conduit installation.--" is revised as attached.

In the Special Provisions, in Section 12-16.02, "BASIC MATERIALS AND METHODS," under "PART 3.—EXECUTION," under "INSTALLATION," the subsection "Cable trays" is revised as follows:

"Cable trays.—Cable support surface of top rungs of cable trays shall be flattened. Inside of cable tray shall not have flanges or other projections. Rung spacing shall be 152 mm. Cable tray inside the Electrical Room in the Lower Floor shall be supported from the ceiling. Cable tray supports shall be located at 1500 mm spacing. Cable tray sections shall be rigidly secured to each other with connector plates and hardware as required. Cable tray shall be provided with hardware as required to provide rigid support at all heights and positions as indicated on the plans. Cables shall be neatly organized and secured to the cable tray with plastic restrainers every 1.5 meters or less to support the suspended cable weight. The cable tray system shall be continuously bonded to the grounding system with a No. 2/0 bare copper conductor."

In the Special Provisions, in Section 12-16.02, "BASIC MATERIALS AND METHODS," under "PART 3.—EXECUTION," under "INSTALLATION," in the subsection "Conductor and cable installation," the eighth paragraph is revised as follows:

"All junction boxes shall be identified with felt-tip pen denoting the circuits contained in the box."

In the Special Provisions, in Section 12-16.02 "BASIC MATERIALS AND METHOD," under "PART 3.—EXECUTION," under "INSTALLATION," subsection "Conductor identification.--" is revised as attached.

In the Special Provisions, in Section 12-16.03, "ELECTRICAL EQUIPMENT," under "PART 3.—EXECUTION," under "INSTALLATION," in the subsection "Panelboard installation," the first and second paragraphs are revised as follows:

"Panelboard installation.--Set cabinets plumb and symmetrical with building lines. Train interior wiring as specified under "Conductor and Cable Installation" in "Basic Materials and Methods" of these special provisions. Touch-up paint any marks, blemishes, or other finish damage suffered during installation. Replace cabinets, doors or trim exhibiting dents, bends, warps or poor fit.

Mounting height shall be 1.67 meters to the highest circuit breaker handle, measured above the finished floor."

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In the Special Provisions, in Section 12-16.04, "LIGHTING," under "PRODUCTS," in the subsection "Courtyard canopy decorative column lights.," the following paragraph is added after the first paragraph:

"Working drawings shall be submitted for approval. Working drawings shall show fabrication and installation for each type fabricated item required including plans, elevations, section, profiles, fittings, connections, and anchors."

In the Special Provisions, in Section 12-16.07, "LIGHT EMITTING DIODE SIGNAL MODULE," in the subsection "QUALITY CONTROL PROGRAM," the second paragraph is revised as follows:

"Documentation of the QC process and test results shall be submitted to the Engineer and also kept on file for a minimum period of seven years."

In the Special Provisions, in Section 12-16.08, "CHANGEABLE MESSAGE SIGN," in the subsection "FIELD QUALITY CONTROL," the entire paragraph is revised as follows:

"Testing.--The operational test for the CMS system shall be submitted for approval and performed by the Contractor in the presence of the Engineer. The operational tests shall demonstrate that all functions of the system operate in the manner described in the manufacturer's literature and demonstrate system stability under normal vibration and shocks to components. The Contractor shall notify the Engineer in writing not less than 10 days in advance of performing the operational tests."

In the Special Provisions, in Section 12-16.13, "CLOSED CIRCUIT TELEVISION SYSTEM-SECURITY," in the subsection "INSTALLATION," the following paragraph is added after the second paragraph:

"The cameras inside the toll booths shall be mounted to the toll booth frame as directed by the Engineer."

In the Special Provisions, in Section 12-16.13, "CLOSED CIRCUIT TELEVISION SYSTEM-SECURITY," the subsection "TRAINING," is revised as follows:

"TRAINING

The Contractor shall provide minimum of two 4-hour sessions of on-site training on the use, operation and maintenance of the system for not more than 8 designated State employees. The Contractor shall notify the Engineer in writing not less than 10 days in advance of proposed training class."

In the Special Provisions, in Section 12-16.14, "FIBER OPTIC CABLE FOR CLOSED CIRCUIT TELEVISION SECURITY SYSTEM," the subsection "CABLE INSTALLATION," is revised as attached.

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In the Special Provisions, in Section 12-16.22, "AUTOMATED TOLL COLLECTION AND ACCOUNTING SYSTEM ELECTRICAL SYSTEM," under "PART 3 EXECUTION.—," under "FIELD QUALITY CONTROL," in the subsection "Testing," the following paragraph is added after the second paragraph:

“During the testing, the Contractor shall have qualified personnel to witness the testing and do the necessary repairs for Contractor furnished equipment and cable installation as soon as possible so as to not delay the completion of the testing.”

In the Proposal and Contract, the Engineer's Estimate Items 53 and 54 are added as attached.

To Proposal and Contract book holders:

Replace page 5 of the Engineer's Estimate in the Proposal with the attached revised page 5 of the Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it.

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL, Chief  
Office of Plans, Specifications & Estimates  
Office Engineer

Attachments

#### **10-1.02 WATER POLLUTION CONTROL (STORM WATER POLLUTION PREVENTION PLAN)**

Water pollution control work shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications and these special provisions.

This project lies within the boundaries of the San Francisco Bay Regional Water Quality Control Board and shall conform to the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit for General Construction Activities No. CAS000002, Order No, 99-08-DWQ, including State Water Resources Control Board (SWRCB) Resolution No. 2001-046, and the NPDES Permit for the State of California Department of Transportation Properties, Facilities, and Activities, No. CAS000003, Order No, 99-06-DWQ issued by the SWRCB. These permits, hereafter referred to as the "Permits," regulate storm water discharges associated with construction activities.

Water pollution control work shall conform to the requirements in the "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual" and the "Construction Site Best Management Practices (BMPs) Manual," and addenda thereto issued up to, and including, the date of advertisement of the project, hereafter referred to respectively as the "Preparation Manual" and the "Construction Site BMP Manual" and collectively as the "Manuals." In addition, water pollution control work shall conform to the requirements in the Sampling and Analysis Bulletin. Copies of the Manuals and the Permits may be obtained from the Department of Transportation, Material Operations Branch, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, Telephone: (916) 445-3520. Copies of the Manuals and the Sampling and Analysis Bulletin may also be obtained from the Department's Internet Web Site at: <http://www.dot.ca.gov/hq/construc/stormwater.html>.

The Contractor shall know and fully comply with the applicable provisions of the Manuals, Permits, and Federal, State, and local regulations that govern the Contractor's operations and storm water discharges from both the project site and areas of disturbance outside the project limits during construction. The Contractor shall maintain copies of the Permits at the project site and shall make the Permits available during construction.

Unless arrangements for disturbance or use of areas outside the project limits are made by the Department and made part of the contract, it is expressly agreed that the Department assumes no responsibility for the Contractor or property owner with respect to any arrangements made between the Contractor and property owner. The Contractor shall implement, inspect and maintain all necessary water pollution control practices to satisfy all applicable Federal, State, and Local laws and regulations that govern water quality for areas used outside of the highway right-of-way or areas arranged for the specific use of the Contractor for this project. Installing, inspecting, and maintaining water pollution control practices on areas outside the highway right-of-way not specifically arranged for and provided for by the Department for the execution of this contract will not be paid for.

The Contractor shall be responsible for the costs and for liabilities imposed by law as a result of the Contractor's failure to comply with the provisions set forth in this section "Water Pollution Control (Storm Water Pollution Prevention Plan)", including but not limited to, compliance with the applicable provisions of the Manuals, Permits and Federal, State and local regulations. Costs and liabilities include, but are not limited to, fines, penalties, and damages whether assessed against the State or the Contractor, including those levied under the Federal Clean Water Act and the State Porter Cologne Water Quality Act.

In addition to the remedies authorized by law, money due the Contractor under the contract, in an amount determined by the Department, may be retained by the State of California until disposition has been made of the costs and liabilities.

When a regulatory agency or other third party identifies a failure to comply with the permit or any other local, State, or federal requirement, the Engineer may retain money due the Contractor, subject to the following:

- A. The Department will give the Contractor 30 days notice of the Department's intention to retain funds from partial payments which may become due to the Contractor prior to acceptance of the contract. Retention of funds from payments made after acceptance of the contract may be made without prior notice to the Contractor.
- B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications.
- C. If the Department has retained funds and it is subsequently determined that the State is not subject to the costs and liabilities in connection with the matter for which the retention was made, the Department shall be liable for interest on the amount retained for the period of the retention, and the rate of interest payable shall be 6 percent per annum.

Conformance with the provisions of this section "Water Pollution Control (Storm Water Pollution Prevention Plan)" shall not relieve the Contractor from the Contractor's responsibilities, as provided in Section 7, "Legal Relations and Responsibility," of the Standard Specifications.

The Contractor shall notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor or otherwise access the project site or the Contractor's records pertaining to water pollution control work.

## **STORM WATER POLLUTION PREVENTION PLAN PREPARATION, APPROVAL AND AMENDMENTS**

As part of the water pollution control work, a Storm Water Pollution Prevention Plan, hereafter referred to as the "SWPPP," is required for this contract. The SWPPP shall conform to the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications, the requirements in the Manuals, the requirements of the Permits, and these special provisions. Upon the Engineer's approval of the SWPPP, the SWPPP shall be considered to fulfill the provisions in Section 7-1.01G, "Water Pollution," of the Standard Specifications for development and submittal of a Water Pollution Control Program.

No work having potential to cause water pollution, as determined by the Engineer, shall be performed until the SWPPP has been approved by the Engineer.

The Contractor shall designate a Water Pollution Control Manager. The Water Pollution Control Manager shall be responsible for the preparation of the SWPPP and any required modifications or amendments and shall be responsible for the implementation and adequate functioning of the various water pollution control practices employed. The Water Pollution Control Manager shall serve as the primary contact for all issues related to the SWPPP or its implementation. The Contractor shall submit to the Engineer a statement of qualifications, describing the training, previous work history and expertise of the individual selected by the Contractor to serve as Water Pollution Control Manager. The Engineer will reject the Contractor's submission of a Water Pollution Control Manager if the submitted qualifications are deemed to be inadequate.

Within 30 days after the approval of the contract, the Contractor shall submit 3 copies of the draft SWPPP to the Engineer. The Engineer will have 10 days to review the SWPPP. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the SWPPP within 10 days of receipt of the Engineer's comments. The Engineer will have 10 days to review the revisions. Upon the Engineer's approval of the SWPPP, 4 approved copies of the SWPPP, incorporating the required changes, shall be submitted to the Engineer. In order to allow construction activities to proceed, the Engineer may conditionally approve the SWPPP while minor revisions are being completed. If the Engineer does not review or approve the SWPPP within the time specified, compensation will be made in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The SWPPP shall apply to all areas that are directly related to construction including, but not limited to, staging areas, storage yards, material borrow areas, and access roads within or outside of the highway right-of-way.

The SWPPP shall incorporate water pollution control practices in the following six categories:

- A. Soil stabilization;
- B. Sediment control;
- C. Wind erosion control;
- D. Tracking control;
- E. Non-storm water control; and
- F. Waste management and material pollution control.

The Contractor shall develop a Water Pollution Control Schedule that shall describe the timing of grading or other work activities that could affect water pollution. The Water Pollution Control Schedule shall be updated by the Contractor to reflect any changes in the Contractor's operations that would affect the necessary implementation of water pollution control practices.

The Contractor shall incorporate the "Minimum Requirements" presented in the Preparation Manual into the SWPPP. In addition to the "Minimum Requirements" presented in the Preparation Manual, the Contractor shall complete the BMP Consideration Checklist presented in the Preparation Manual. The Contractor shall identify and incorporate into the SWPPP the water pollution control practices selected by the Contractor or as directed by the Engineer.

In addition to the Minimum Requirements presented in the Preparation Manual, special requirements shall be incorporated into the SWPPP and the Water Pollution Control Cost Break-Down as follows:

<b>Special Requirement(s)</b>	
<b>Category</b>	<b>BMP, location and quantity</b>
<b>Soil Stabilization</b>	SS-7 Geotextiles, Plastic Covers, and Erosion Control Blankets/Mats; temporary stockpile and slope stabilization; 1100 M2
<b>Sediment Control</b>	SC-1 Silt Fence, sediment control around disturbed slopes, 450 M SC-10 Storm Drain Inlet Protection, filter runoff at functioning drainage inlets throughout construction, 9 EA
<b>Non Storm Water Control</b>	NS-2 Dewatering Operations, open excavations, lump sum NS-3 Paving and Grinding Operations, toll plaza and parking area, lump sum
<b>Waste Management &amp; Materials Pollution Control</b>	WM-3 Stockpile Management, stockpile locations, lump sum WM-6 Hazardous Waste Management, hazardous materials storage and disposal locations, lump sum

The following contract items of work, shall be incorporated into the SWPPP as "Temporary Water Pollution Control Practices": Temporary Concrete Washout Facility and Temporary Entrance/Exit. The Contractor's attention is directed to these special provisions provided for each temporary water pollution control practice.

The SWPPP shall include, but not be limited to, the items described in the Manuals, Permits, and related information contained in the contract documents.

The Contractor shall prepare an amendment to the SWPPP when there is a change in construction activities or operations which may affect the discharge of pollutants to surface waters, ground waters, municipal storm drain systems, or when the Contractor's activities or operations violate any condition of the Permits, or when directed by the Engineer. Amendments shall show additional water pollution control practices or revised operations, including those areas or operations not shown in the initially approved SWPPP. Amendments to the SWPPP shall be prepared, and submitted for review and approval in the same manner as specified for the SWPPP approval. Subsequent amendments shall be submitted within a time approved by the Engineer, but in no case longer than the time specified for the initial submittal and review of the SWPPP. At a minimum, the SWPPP shall be amended annually and submitted to the Engineer 25 days prior to the defined rainy season.

The Contractor shall keep one copy of the approved SWPPP and approved amendments at the project site. The SWPPP shall be made available upon request of a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency or the local storm water management agency. Requests by the public shall be directed to the Engineer.

#### **COST BREAK-DOWN**

The Contractor shall submit to the Engineer a cost break-down for the contract lump sum item of water pollution control, together with the SWPPP.

The cost break-down shall be completed and furnished in the format shown in the example of the cost break-down included in this section. Unit descriptions and quantities shall be designated by the Contractor, except for the specified special requirements shown in the example. The units and quantities given in the example, if provided, are special requirements specified for the SWPPP, and shall be included in the cost break-down furnished to the Engineer. The Contractor shall verify the estimated quantities of the special requirements and submit revised quantities in the cost break-down.

The Contractor shall determine the quantities required to complete the work of water pollution control. The quantities and their values shall be included in the cost break-down submitted to the Engineer for approval. The Contractor shall be responsible for the accuracy of the quantities and values used in the cost break-down submitted for approval. The cost break-down shall not include water pollution control practices which are shown on the plans and for which there is a separate contract item.

The sum of the amounts for the units of work listed in the cost break-down shall be equal to the contract lump sum price paid for water pollution control. Profit shall be included in each individual unit listed in the cost break-down. The cost break-down shall be submitted and approved within the same times specified for the SWPPP. Partial payment for the item of water pollution control will not be made until the cost break-down is approved, in writing, by the Engineer. Attention is directed to "Overhead" of these special provisions.

Adjustments in the items of work and quantities listed in the approved cost break-down shall be made when required to address amendments to the SWPPP, except when the adjusted items are paid for as extra work.

No adjustment in compensation will be made in the contract lump sum price paid for water pollution control due to differences between the quantities shown in the approved cost break-down and the quantities required to complete the work as shown on the approved SWPPP. No adjustment in compensation will be made for ordered changes to correct SWPPP work resulting from the Contractor's own operations or from the Contractor's negligence.

The approved cost break-down will be used to determine partial payments during the progress of the work and as the basis for calculating the adjustment in compensation for the item of water pollution control due to increases or decreases of quantities ordered by the Engineer. When an ordered change increases or decreases the quantities of an approved cost break-down item, the adjustment in compensation will be determined in the same manner specified for increases and decreases in the quantity of a contract item of work in conformance with the provisions in Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications. If an ordered change requires a new item not on the approved cost break-down, the adjustment in compensation will be determined in the same manner specified for extra work in conformance with Section 4-1.03D, "Extra Work," of the Standard Specifications.

If requested by the Contractor and approved by the Engineer, changes to the water pollution control practices listed in the approved cost break-down, including the addition of new water pollution control practices, will be allowed. The changes shall be included in an approved amendment to the SWPPP. If the changes to the water pollution control practices requested by the Contractor would result in a net cost increase to the lump sum price for water pollution control, an adjustment in compensation will be made without change to the item of water pollution control. The net cost increase to the item of water pollution control resulting from changes requested by the Contractor will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

# **WATER POLLUTION CONTROL COST BREAK-DOWN**

**Contract No. -04-006044**

UNIT DESCRIPTION	UNIT	APPROXIMATE QUANTITY	VALUE	AMOUNT
<b>MINIMUM REQUIREMENTS</b>				
SS-1 Scheduling	LS			
SS-2 Preservation of Existing Vegetation	LS			
SC-7 Street Sweeping and Vacuuming	LS			
WE-1 Wind Erosion Control	LS			
NS-6 Illicit Connection/Illegal Discharge Detection and Reporting	LS			
NS-8 Vehicle and Equipment Cleaning	LS			
NS-9 Vehicle and Equipment Fueling	LS			
NS-10 Vehicle and Equipment Maintenance	LS			
WM-1 Material Delivery and Storage	LS			
WM-2 Material Use	LS			
WM-4 Spill Prevention and Control	LS			
WM-5 Solid Waste Management	LS			
WM-9 Sanitary/Septic Waste Management	LS			
<b>SPECIAL REQUIREMENTS</b>				
SS-7 Geotextiles, Plastic Covers, and Erosion Control Blankets/Mats	M2	1100		
SC-1 Silt Fence	M	450		
SC-10 Storm Drain Inlet Protection	EA	9		
NS-2 Dewatering Operations	LS			
NS-3 Paving and Grinding Operations	LS			
WM-3 Stockpile Management	LS			
WM-6 Hazardous Waste Management	LS			

**TOTAL** \_\_\_\_\_

## SWPPP IMPLEMENTATION

Upon approval of the SWPPP, the Contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting, maintaining, removing, and disposing of the water pollution control practices included in the SWPPP and any amendments. Unless otherwise directed by the Engineer, the Contractor's responsibility for SWPPP implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. Requirements for installation, construction, inspection, maintenance, removal, and disposal of water pollution control practices are specified in the Manuals and these special provisions.

If the Contractor or the Engineer identifies a deficiency in any aspect of the implementation of the approved SWPPP or amendments, the deficiency shall be corrected immediately. The deficiency may be corrected at a later date and time if requested by the Contractor and approved by the Engineer in writing, but not later than the onset of precipitation. If the Contractor fails to correct the identified deficiency by the date agreed or prior to the onset of precipitation the project shall be in noncompliance. Attention is directed to Section 5-1.01, "Authority of the Engineer," of the Standard Specifications and the payment sections of these special provisions for possible noncompliance penalties.

If the Contractor fails to conform to the provisions of "Water Pollution Control (Storm Water Pollution Prevention Plan)," the Engineer may order the suspension of construction operations which create water pollution.

Implementation of water pollution control practices may vary by season. The Construction Site BMP Manual and these special provisions shall be followed for control practice selection of year round, rainy season and non-rainy season water pollution control practices.

### Year-Round Implementation Requirements

The Contractor shall have a year-round program for implementing, inspecting and maintaining water pollution control practices for wind erosion control, tracking control, non-storm water control, and waste management and materials pollution control.

The National Weather Service weather forecast shall be monitored and used by the Contractor on a daily basis. An alternative weather forecast proposed by the Contractor may be used if approved by the Engineer. If precipitation is predicted, the necessary water pollution control practices shall be deployed prior to the onset of the precipitation.

Disturbed soil areas shall be considered active whenever the soil disturbing activities have occurred, continue to occur or will occur during the ensuing 21 days. Non-active areas shall be protected as prescribed in the Construction Site BMP Manual within 14 days of cessation of soil disturbing activities or prior to the onset of precipitation, whichever occurs first.

The Contractor shall implement, maintain, and inspect the following temporary sediment control practices on a year-round basis. The listed practices shall remain in place until their use is no longer needed, as determined by the Engineer.

<b>Year-Round Sediment Control Practices</b>	<b>Location used</b>
SC-7 Street Sweeping and Vacuuming	Access points at existing traveled roadways

### Rainy Season Requirements

Soil stabilization and sediment control practices conforming to the requirements in the Special Requirements and applicable Preparation Manual Minimum Requirements, shall be provided throughout the rainy season, defined as between October 15 and April 15.

An implementation schedule of required soil stabilization and sediment control practices for disturbed soil areas shall be completed not later than 20 days prior to the beginning of each rainy season. The implementation schedule shall identify the soil stabilization and sediment control practices to be implemented and the dates on which the implementation will be 25 percent, 50 percent, and 100 percent complete, respectively. Construction activities beginning during the rainy season shall implement applicable soil stabilization and sediment control practices. The Contractor shall implement soil stabilization and sediment control practices a minimum of 10 days prior to the start of the rainy season.

Throughout the defined rainy season, the active disturbed soil area of the project site shall be not more than 2 hectares. The Engineer may approve, on a case-by-case basis, expansions of the active disturbed soil area limit. Soil stabilization and sediment control materials shall be maintained on site sufficient to protect the unprotected disturbed soil area. A detailed plan for the mobilization of sufficient labor and equipment shall be maintained to deploy the water pollution control practices required to protect the project site prior to the onset of precipitation events.

### **Non-Rainy Season Requirements**

The non-rainy season shall be defined as all days outside the defined rainy season. The Contractor's attention is directed to the Construction Site BMP Manual for soil stabilization and sediment control implementation requirements on disturbed soil areas during the non-rainy season. Disturbed soil areas within the project shall be protected in conformance with the requirements in the Construction Site BMP Manual with an effective combination of soil stabilization and sediment control.

### **MAINTENANCE**

To ensure the proper implementation and functioning of water pollution control practices, the Contractor shall regularly inspect and maintain the construction site for the water pollution control practices identified in the SWPPP. The construction site shall be inspected by the Contractor as follows:

- A. Prior to a forecast storm;
- B. After a precipitation event which causes site runoff;
- C. At 24 hour intervals during extended precipitation events;
- D. Routinely, a minimum of once every 2 weeks outside of the defined rainy season;
- E. Routinely, a minimum of once every week during the defined rainy season.

The Contractor shall use the Storm Water Quality Construction Site Inspection Checklist provided in the Preparation Manual or an alternative inspection checklist provided by the Engineer. One copy of each site inspection record shall be submitted to the Engineer within 24 hours of completing the inspection.

### **REPORTING REQUIREMENTS**

#### **Report of Discharges, Notices or Orders**

If the Contractor identifies any discharge into receiving waters in a manner causing, or potentially causing, a condition of pollution, or if the project receives a written notice or order from any regulatory agency, the Contractor shall immediately inform the Engineer. The Contractor shall submit a written report to the Engineer within 7 days of the discharge event, notice, or order. The report shall include the following information:

- A. The date, time, location, nature of the operation, and type of discharge, including the cause or nature of the notice or order.
- B. The water pollution control practices deployed before the discharge event, or prior to receiving the notice or order.
- C. The date of deployment and type of water pollution control practices deployed after the discharge event, or after receiving the notice, or order, including additional measures installed or planned to reduce or prevent reoccurrence.
- D. An implementation and maintenance schedule for any affected water pollution control practices.

#### **Report of First-Time Non-Storm Water Discharge**

The Contractor shall notify the Engineer at least 3 days in advance of each first-time non-storm water discharge event, excluding exempted discharges. The Contractor shall notify the Engineer of each different operation causing a non-storm water discharge and shall obtain field approval for each first-time non-storm water discharge. Non-storm water discharges shall be monitored at each first-time occurrence and routinely thereafter.

#### **Annual Certifications**

By June 15 of each year, the Contractor shall complete and submit an Annual Construction Activity Certification as contained in the Preparation Manual to the Engineer.

## **PAYMENT**

The contract lump sum price paid for prepare storm water pollution prevention plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in developing, preparing, obtaining approval of, revising, and amending the SWPPP, including the sampling and analysis plan, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Attention is directed to Section 9-1.06, "Partial Payments," and Section 9-1.07, "Payment After Acceptance," of the Standard Specifications. Payments for prepare storm water pollution prevention plan will be made as follows:

- A. After the SWPPP has been approved by the Engineer, 75 percent of the contract item price for prepare storm water pollution prevention plan will be included in the monthly partial payment estimate; and
- B. After acceptance of the contract in conformance with the provisions in Section 7-1.17, "Acceptance of Contract," of the Standard Specifications, payment for the remaining 25 percent of the contract item price for prepare storm water pollution prevention plan will be made in conformance with the provisions in Section 9-1.07.

The contract lump sum price paid for water pollution control shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing, constructing, removing, and disposing of water pollution control practices, including non-storm water and waste management and materials pollution water pollution control practices, except those shown on the plans and for which there is a contract item of work, and excluding developing, preparing, obtaining approval of, revising, and amending the SWPPP, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Storm water sampling and analysis will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

The cost of maintaining the temporary water pollution control practices shall be divided equally by the State and the Contractor as follows:

### **Soil Stabilization**

All temporary water pollution control practices except:

SS-1 Scheduling

SS-2 Preservation of Existing Vegetation

### **Sediment Control**

All temporary water pollution control practices.

### **Tracking Control**

All temporary water pollution control practices except:

SC-7 Street Sweeping and Vacuuming

### **Wind Erosion Control**

All temporary water pollution control practices.

### **Non-Storm Water Control**

No sharing of maintenance costs will be allowed.

### **Waste Management & Material Control**

No sharing of maintenance costs will be allowed.

The division of cost will be made by determining the cost of maintaining temporary water pollution control practices in conformance with the provisions in Section 9-1.03, "Force Account Payment," of the Standard Specifications and paying to the Contractor one-half of that cost. Clean-up, repair, removal, disposal, improper installation, and replacement of temporary water pollution control practices damaged by the Contractor's negligence shall not be considered as included in the cost for performing maintenance and no additional compensation will be allowed therefor.

The provisions for sharing maintenance costs shall not relieve the Contractor from the responsibility for providing appropriate maintenance on those items where maintenance costs are not shared.

Full compensation for maintenance costs of water pollution control practices not shared, as specified in these special provisions, shall be considered as included in the contract lump sum price paid for water pollution control and no additional compensation will be allowed therefor.

Those water pollution control practices which are shown on the plans and for which there is a contract item of work will be measured and paid for as that contract item of work.

The Engineer will retain an amount equal to 25 percent of the estimated value of the contract work performed during estimate periods in which the Contractor fails to conform to the provisions of this section "Water Pollution Control (Storm Water Pollution Prevention Plan)," as determined by the Engineer.

Retention for failure to conform to the provisions in this section "Water Pollution Control (Storm Water Pollution Prevention Plan)" shall be in addition to the other retention provided for in the contract. The amounts retained for failure of the Contractor to conform to the provisions in this section will be released for payment on the next monthly estimate for partial payment following the date that an approved SWPPP has been implemented and maintained, and water pollution is adequately controlled, as determined by the Engineer.

### **12-1.15 PROJECT RECORD DRAWINGS**

The Contractor shall prepare and maintain one set of project record drawings, using an unaltered set of original project plans, to clearly show all as-constructed information for the project. As a minimum, the information to be shown shall include 1) any plan clarifications or change orders, 2) locations of any underground utilities, or 3) the location, size, type, and manufacturer of all major products or components selected by the Contractor for use in the work.

All markings shall be placed on the project record drawings using red ink or red pencil. Original figures shall not be eradicated nor written over and superseded material shall be neatly lined out. Additional drawings shall be submitted if the required information cannot be clearly shown on the original set of project plans. The additional drawings shall be not less than 279 mm x 432 mm in size and shall have the contract number on each sheet. The Contractor shall sign and date each sheet of the project record drawings to verify that all as-constructed information shown on the drawings is correct.

The Contractor shall periodically review the set of project record drawings with the Engineer during the progress of the work to assure that all changes and other required information are being recorded.

Before completion of the work, the Contractor shall request a review of the project record drawings to determine the completeness and adequacy of them. If the project record drawings are unacceptable, the Contractor shall inspect, measure, and survey the project as necessary to record the required additional information.

The set of completed project record drawings shall be delivered to the Engineer prior to acceptance of the contract.

## **TESTING.—**

After the electrical system installation work has been completed, the electrical system shall be tested in the presence of the Engineer to demonstrate that the electrical system functions properly. Two weeks prior to field testing, the Contractor shall submit to the Engineer for review, and approval an in-depth detailed testing procedure that includes the following:

1. The manufacturers recommended testing procedures.
2. Interface testing with all associated external equipment which includes testing of all the input and outputs for control or annunciation.
3. Field calibration verification of all field installed equipment and devices (gauges, valves, instruments) shall be included in the field testing procedures to verify their accuracy.
4. The testing format will be in a manner of a sign off sheet for the witnessing Engineer to sign.

The Contractor shall also submit to the Engineer prior to testing, all instrument and testing calibration certifications to be used. Calibration certifications have to be completed within 6 months of the required field tests.

No testing will be accepted without the test equipment calibration certifications or acceptable testing procedures.

The Contractor shall make necessary repairs, replacements, adjustments and re-tests at his expense.

Attention is directed to "Automated Toll Collection and Accounting System Electrical System," of these special provisions regarding testing of State-furnished ATCAS equipment.

**Conduit installation.**--Conduit trade sizes are shown on the plans. No deviation from the conduit size shown on the plans will be permitted without written permission from the Engineer.

Conduit shall be concealed unless otherwise shown on the plans.

Conduits shall be tightly covered and well protected during construction using metallic bushings and bushing "pennies" to seal open ends.

Rigid non-metallic conduit bends of 30 degrees or greater shall be factory-made long radius sweeps. Bends less than 30 degrees shall be made using an approved heat box.

A pull rope shall be installed in all empty conduits. At least one meter of pull rope shall be doubled back into the conduit at each termination.

Locations of conduit runs shall be planned in advance of the installation and coordinated with the ductwork, plumbing, ceiling and wall construction in the same areas and shall not unnecessarily cross other conduits or pipe, nor prevent removal of ceiling tiles or panels, nor block access to mechanical or electrical equipment.

Where practical, conduits shall be installed in groups in parallel, vertical or horizontal runs and at elevations that avoid unnecessary offsets.

Exposed conduit shall be installed parallel and at right angles to the building lines.

Conduits shall not be placed closer than 300 mm from a parallel hot water or steam pipe or 75 mm from such lines crossing perpendicular to the runs.

All raceway systems shall be secured to the building structures using specified fasteners, clamps and hangers.

Single conduit runs shall be supported by using one hole pipe clamps. Where run horizontally on walls in damp or wet locations, conduit shall be installed with "clamp backs" to space conduit off the surface.

Multiple conduit runs shall be supported with construction channel secured to the building structure. Conduits shall be fastened to construction channel with channel compatible pipe clamps.

Raceways of different types (cable tray to conduit) shall be joined using approved couplings or transition fittings.

Expansion couplings shall be installed where conduit crosses a building separation or expansion joint.

All floor and wall penetrations shall be sealed water-tight with the appropriate fittings.

Prior to wire installation all underground and conduits installed in structures (whether new or existing) shall be cleaned with a mandrel, cylindrical wire brush and blown out with compressed air witnessed and verified by the Engineer. The mandrel shall not fill less than 85 percent of the conduit size. The cylindrical wire brush shall be sized accordingly to brush the full 360 degrees. Submit for approval all mandrels and brushes that the Contractor intends to use with the appropriate data (manufacturer, conduit size to be used). The Contractor shall notify the Engineer for the cleaning mandreling and wire installation."

Prior to any cable installation, the Contractor shall submit for review by the Engineer detailed installation procedures for the Fiber Optic Cable. The submittal shall include the cable manufacturer's installation procedure, pulling lubricant recommended by the fiber optic manufacturer (with lubricant data back up, tension measuring device with recent calibration data) and any other mechanical aids being used.

**Conductor identification.**--The neutral and equipment grounding conductors shall be identified as follows:

Neutral conductor shall have a white or natural gray insulation except that conductors No. 4 and larger may be identified by distinctive white marker such as paint or white tape at each termination.

Equipment grounding conductor shall be bare or insulated. If insulated, equipment grounding conductors shall have green or green with one or more yellow stripes insulation over its entire length except that conductors No. 4 and larger may be permanently identified by distinctive green tape over its entire exposed insulation."

Conductors with gray insulation shall be prohibited for use in control panels.

Feeder and branch circuit ungrounded conductors shall be color coded by continuously colored insulation, except conductors No. 6 AWG or larger may be color coded by colored tape at each connection and where accessible. Ungrounded conductor color coding shall be as follows:

SYSTEM	COLOR CODE
120/240V-Single phase	Black, blue
120/240V-Three phase	Black, orange, blue
120/208V-Three phase	Black, red, blue
277/480V-Three phase	Brown, orange, yellow

All conductors shall be identified by their panel board and circuit number. All control conductors including control conductors of manufacturer supplied and field wired control device shall be identified at each termination with the wire numbers shown on the plans, approved working drawings, and as directed by the Engineer where deemed necessary. Identification shall be made with one of the following:"

1. Adhesive backed paper or cloth wrap-around markers with clear, heat shrinkable tubing sealed over either type of marker.
2. Self-laminating wrap around type, printable, transparent, permanent heat bonding type thermoplastic film markers.
3. Pre-printed, white, heat-shrinkable tubing.

Each terminal block shall have a molded marking strip attached with screws. The identifying numbers of the terminating conductors, as shown on the plans or on the submittal drawings, shall be engraved in the marking strip.

## **CABLE INSTALLATION**

Prior to cable installation all conduits (whether new or existing) shall be cleaned with a cylindrical wire brush, blown out with compressed air and mandrelled. The mandrel shall not fill less than 85 percent of the conduit size. The cylindrical wire brush shall be sized accordingly to brush clean the full 360 degrees. Submit for approval all mandrels and brushes that the Contractor intends to use with the appropriate data (manufacturer and conduit size to be used). Cleaning, mandreling and cable installation shall be witnessed and verified by the Engineer.

Prior to any cable installation, the Contractor shall submit for review by the Engineer detailed installation procedures for the fiber optic cable. The submittal shall include the cable manufacturer's installation procedure, pulling lubricant recommended by the fiber optic manufacturer (with lubricant data back up, tension measuring device with recent calibration data) and any other mechanical aids being used.

Installation procedures shall be in conformance with the procedures specified by the cable manufacturer for the specific cable being installed. The Contractor shall submit for review by the Engineer, a detailed installation procedure, including equipment to be used by the Contractor and the manufacturer's recommended procedures for pulling fiber optic cable at least 20 working days prior to installing cable. Mechanical aids may be used provided that a tension measuring device, and a break away swivel are placed in tension to the end of the cable. The tension in the cable shall not exceed 2225 N or the manufacturer's recommended pulling tension, whichever is less.

During cable installation, the bend radius shall be maintained at a minimum of twenty times the outside diameter. The cable grips for installing the fiber optic cable shall have a ball bearing swivel to prevent the cable from twisting during installation.

FO cable shall be installed using a cable pulling lubricant recommended by the FO cable. Contractor's personnel shall be stationed at each camera location and FDU through which the cable is to be pulled to lubricate and prevent kinking or other damage.

FO cable shall be installed without splices.

**ENGINEER'S ESTIMATE**  
**04-006044**

Item	Item Code	Item	Unit of Measure	Estimated Quantity	Unit Price	Item Total
41	832003	METAL BEAM GUARD RAILING (WOOD POST)	M	180		
42	839521	CABLE RAILING	M	55		
43	022026	TERMINAL ANCHOR ASSEMBLY (TYPE SFT)	EA	2		
44	839551	TERMINAL SECTION (TYPE B)	EA	1		
45	839565	TERMINAL SYSTEM (TYPE SRT)	EA	1		
46	839701	CONCRETE BARRIER (TYPE 60)	M	40		
47	839704	CONCRETE BARRIER (TYPE 60D)	M	55		
48	840656	PAINT TRAFFIC STRIPE (2-COAT)	M	1510		
49	840666	PAINT PAVEMENT MARKING (2-COAT)	M2	33		
50	842000	PARKING BUMPER (PRECAST CONCRETE)	EA	41		
51	850111	PAVEMENT MARKER (RETROREFLECTIVE)	EA	78		
52	994650	BUILDING WORK	LS	LUMP SUM	LUMP SUM	
53	074019	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	LUMP SUM	LUMP SUM	
54	074020	WATER POLLUTION CONTROL	LS	LUMP SUM	LUMP SUM	

**TOTAL BID: \_\_\_\_\_**